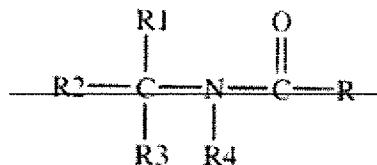


### **AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application. Please add the words shown by underline and delete the words shown by strikethrough.

1. (Currently Amended) A method of producing a human neural cell comprising,

- a) providing a pluripotent human cell; and
- b) culturing the pluripotent human cell with a composition comprising a ceramide compound selected from the group consisting of N-(2-hydroxy-1-(hydroxymethyl)ethyl)palmitoylamide (“S16”), N-(2-hydroxy-1-(hydroxymethyl)ethyl)oleoylamide (“S18”), N,N-bis(2-hydroxyethyl)palmitoylamide (“B16”), N,N-bis(2-hydroxyethyl)oleoylamide (“B18”), N-tris(hydroxymethyl)methylpalmitoylamide (“T16”), N-tris(hydroxymethyl)methyloleoylamide (“T18”), N-acetyl sphingosine (“C2-ceramide”), and N-hexanoylsphingosine (“C6-ceramide”) of the general formula



wherein

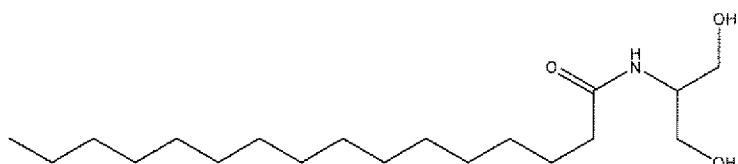
R=a saturated or mono- or polyunsaturated (cis or trans) alkyl group having greater than 2 carbon atoms, and

R1, R2, R3 and R4 may be the same or different and are saturated or mono- or polyunsaturated hydroxylated alkyl groups, aryl groups, or hydrogen

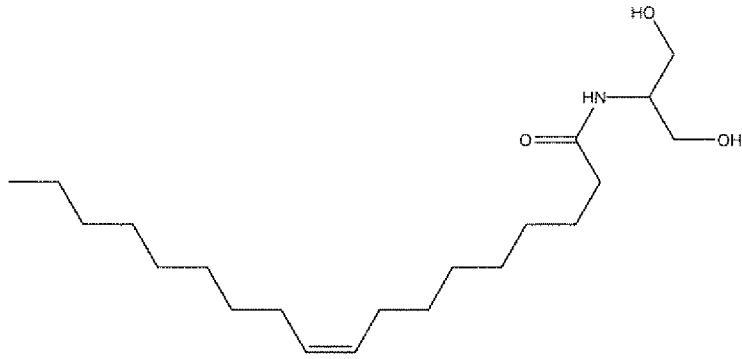
to produce the human neural cell.

2. (Previously presented) The method of Claim 1, wherein the pluripotent human cell is a differentiating pluripotent human cell.

3. (Previously presented) The method of Claim 1, comprising the intermediate step of forming an embryoid body comprising the pluripotent human cell prior to culturing a cell from the embryoid body with the ceramide compound.
4. (Previously presented) The method of Claim 3, wherein the embryoid body is formed by culturing the pluripotent human cell with an essentially serum free medium.
5. (Previously presented) The method of Claim 4, wherein the essentially serum free medium is a MEDII conditioned medium.
6. (Previously presented) The method of Claim 5, comprising the additional steps of,
  - a) dispersing the embryoid body to an essentially single cell suspension;
  - b) culturing the essentially single cell suspension comprising the pluripotent human cell in an adherent culture with a composition comprising the ceramide compound.
7. (Previously presented) The method of Claim 6, wherein the composition comprising the ceramide compound further comprises a MEDII conditioned medium.
8. (Previously presented) The method of Claim 5 wherein the MEDII conditioned medium is a Hep G2 conditioned medium.
9. (Previously presented) The method of Claim 7, wherein the composition comprising the ceramide compound is essentially serum free.
10. (Currently Amended) A method of producing a human neural cell comprising,
  - a) providing a pluripotent human cell; and
  - b) culturing the pluripotent human cell with a composition comprising The method of Claim 1, wherein the composition comprises a ceramide compound of the structure



11. (Currently Amended) A method of producing a human neural cell comprising,
- a) providing a pluripotent human cell; and
  - b) culturing the pluripotent human cell with a composition comprising ~~The method of Claim 1, wherein the composition comprises~~ a ceramide compound of the structure



12. (Previously presented) The method of Claim 1, wherein the concentration of the ceramide compound is from approximately 0.1  $\mu\text{M}$  to approximately 1000  $\mu\text{M}$ .
13. (Previously presented) The method of Claim 1, wherein the concentration of the ceramide compound is from approximately 1  $\mu\text{M}$  to approximately 100  $\mu\text{M}$ .
14. (Previously presented) The method of Claim 1, wherein the concentration of the ceramide compound is from approximately 5  $\mu\text{M}$  to approximately 50  $\mu\text{M}$ .
15. (Previously presented) The method of Claim 1, wherein the concentration of the ceramide compound is approximately 10  $\mu\text{M}$ .
16. (Previously presented) The method of Claim 1, wherein the duration of culturing the human pluripotent cell with the ceramide compound is from approximately 6 hours to 10 days.

17 – 19. (Cancelled)

20. (Previously presented) The method of Claim 1, wherein the pluripotent human cell is selected from the group consisting of a human embryonic stem cell, a human inner cell mass (ICM)/epiblast cell, a human primitive ectoderm cell, and a human primordial germ cell.
21. (Previously presented) The method of Claim 1, wherein the pluripotent human cell is a human embryonic stem cell.
22. (Previously presented) The method of Claim 1, wherein the human pluripotent cell is a multipotent cell.
23. (Previously presented) The method of Claim 22, wherein the multipotent cell is a neural precursor cell.
- 24 - 71. (Cancelled).